

IN THE SPECIFICATION:

Please amend the substitute specification as follows:

Paragraph beginning on page 4, at prenumbered line 11, has been amended as follows:

FIGS. 1-3 are schematic cross sections of an essential portion illustrating a process for manufacturing low temperature polycrystalline silicon thin film transistors (LTPS-TFT) comprising the steps of:

- a) selecting a substrate 1;
- b) forming a buffer oxide 2 formed on said substrate 1;
- c) depositing a amorphous silicon film 3 (active layer) on the buffer oxide 2;
- d) ~~depositing~~ depositing a low temperature oxide 4 on the amorphous silicon film 3, wherein the low temperature oxide 4 forming a stop layer of silicon film dry etching after step d), and a thermal insulating layer for laser annealing of a hard mask preventing removal of a polysilicon spacer after recrystallization (step f):
- ~~d) process, a thermal insulating layer of laser annealing or a hard mask of the removal of polysilicon spacer after recrystallization;~~
- e) etching the amorphous silicon film 3 by photoresist 5 utilizing a hard mask on the low temperature ~~polycrystalline silicon thin film transistor (LTPS-TFT) as a active layer, oxide,~~ and then using a solution of ~~silicon dioxide 6 of~~ for wet isotropic etching of the amorphous silicon films to slightly go toward inner etching of the buffer oxide 2 before or after the removal of the hard mask;
- f) depositing another amorphous silicon film 3a by connecting the amorphous silicon film 3, and then forming the polysilicon spacer 7 by dry etching 8 on either side of the another amorphous silicon film 3a and the amorphous silicon film 3. The polysilicon spacer 7 is selected from the group consisting of polycrystalline silicon film and amorphous silicon film. The polysilicon spacer 7 can replace the dielectric material with oxide, nitride, and metal oxide, etc. and metal material with

aluminum (Al), wolfram (W), molybdenum (Mo) and chromium (Cr), etc.: etc. And then can choose to cancel the polysilicon spacer 7 or not for the next process. The polysilicon spacer 7 is formed ~~behind~~ on either side of the active layer (amorphous silicon film 3) of the low temperature polycrystalline silicon thin film transistor (LTPS-TFT), and then form large silicon grain structures of the active layer 3 according to a direction of grain growth ~~45~~ by 15 by recrystallization of high-energy continuous wavelength laser or recrystallization of excimer laser annealing 9 on dog-bone shape active layer as shown in FIG. 3. Therefore, the active layer generates a temperature gradient.

Paragraph beginning on page 5, at prenumbered line 18, has been amended as follows:

The polysilicon spacer 7 is formed on either side of the active layer selected from a group consisting of a thin film transistor (TFT) and a silicon-on-insulator metal oxide semiconductor field effect transistor (SOI-MOSFET) in a low temperature or high temperature process. The polysilicon spacer 7 is located ~~under~~ on either side of the active layer.

Paragraph beginning on page 6, at prenumbered line 1, has been amended as follows:

FIG.4, shows the relative position of gate 10, source 11, and drain12 to be surrounded by the side of active layer (amorphous silicon film 3) ~~by~~ and the polysilicon spacer 7. Next, FIG. 5 is a scanning electron microscope (SEM) of silicon grain structures with silicon film thickness at 500 angstrom and line width at 2 microns after excimer laser annealing (ELA). It is clear that the elongated silicon grains measure over 1 micron with direction to side of active layer. Because the laser can't melt the thick boundary of active layer and can easily melt thin channel, and then the silicon grain trigger inner recrystallization by the spacer seed of the polysilicon spacer 7. Moreover, it also efficiently overcomes shrinkage effect of active layer caused by surface tension after melting of silicon film. Thus, the present invention is to efficiently improve the self-heating effect by forming a thick polysilicon

spacer 7 without an extra mask on a side of the channel. FIG. 6 is a schematic view showing the active layer position with a dog-bone shape 13 and a scanning direction 14 of a continuous-wavelength laser for recrystallization utilizing the continuous-wavelength laser according to embodiment of the present invention.